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## In the Claims:

Please cancel the amended claims 1-13 of the International application (PCT) and substitute the following new claims.

14. A device for producing a monocrystal by growing the monocrystal from a melt of raw materials with a heating appliance for generating a temperature gradient within the melt of raw material, wherein the heating appliance comprises a rotationally symmetrical furnace with a rotation axis (M) and with an essentially level floor heater and an essentially level cover heater that can be controlled to different temperatures, the device further comprising:

an insulating device that is structured and arranged in such a way that a heat flow in a radial direction perpendicular to the rotation axis (M) of the furnace can be controlled at a preset rate.

- 15. A device in accord with Claim 14, wherein the insulating device is further structured and arranged to provide an insulating effect having a gradient from the cover heater to the floor heater.
- 16. A device in accord with Claim 14, wherein the furnace is cylindrical and further comprising a controller to control a temperature of the floor heater to be lower than a temperature of the cover heater.

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- 17. A device in accord with Claim 14, wherein the insulating device has a tapered cone body with a coaxial cylindrical hollow space that is open at the top and bottom, the insulating device being positioned in the furnace so that the tapered end is towards the floor heater.
- 18. A device in accord with Claim 14, further comprising a jacket heater for the furnace.
- 19. A device in accord with Claim 14, further comprising a heat transmission part having a rotationally symmetrical profiled or unprofiled shape.
- 20. A device in accord with Claim 14, wherein the heaters comprise a heating surface having a ratio to a surface of a monocrystal to be produced to provide a temperature that is essentially homogeneous over a radial cross-section of the monocrystal and a temperature gradient between the floor heater and the cover heater that is essentially constant.
- 21. A device in accord with Claim 20, wherein the surface of each heater is at least 1.5 times the cross-sectional area of the monocrystal.
- 22. A device in accord with Claim 16, wherein the controller can lower the temperature of the floor heater continuously with reference to the cover heater.

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- 23. A device in accord with Claim 14, the device further comprising a clearance between the floor heater and the cover heater, the clearance being greater than the length of a monocrystal to be produced.
- 24. A device in accord with Claim 14, wherein said insulating device comprises graphite.
- 25. A device in accord with Claim 14, further comprising a crucible for receiving the melt of raw material, the crucible being located between the floor heater and the cover heater.
- 26. A device in accord with Claim 14, wherein the furnace is cylindrical and further comprising:

a controller to control a temperature of the floor heater to be lower than a temperature of the cover heater;

an insulator device having a tapered cone body with a coaxial cylindrical hollow space that is open at the top and bottom, the insulator device being positioned in the furnace so that the tapered end is towards the floor heater;

a jacket heater for the furnace;

a crucible for receiving the melt of raw material, the crucible being located between the floor heater and the cover heater; and

a clearance between the floor heater and the cover heater, the clearance being greater than the length of a monocrystal to be produced.

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- 27. A device in accord with Claim 26, further comprising a heat transmission part having a rotationally symmetrical profiled or unprofiled shape.
- 28. A device in accord with Claim 27, wherein the floor and cover heaters comprise a heating surface having a ratio to a surface of a monocrystal to be produced to provide a temperature that is essentially homogeneous over a radial cross-section of the monocrystal and a temperature gradient between the floor heater and the cover heater that is essentially constant.
- 29. A device in accord with Claim 28, wherein the surface of each of the floor and cover heaters is at least 1.5 times the cross-sectional area of the monocrystal.
- 30. A device in accord with Claim 26, wherein the controller can lower the temperature of the floor heater continuously with reference to the cover heater.
- 31. A device in accord with Claim 26, wherein said insulating device comprises graphite.
- 32. A device for producing a monocrystal by growing the monocrystal from a melt of raw materials with a heating appliance for generating a temperature gradient within the melt of raw material, wherein the heating appliance comprises a rotationally symmetrical furnace with a rotation axis (M) and with an essentially level floor heater

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and an essentially level cover heater that can be controlled to different temperatures, the device further comprising:

an insulating device that is structured and arranged to provide an insulating effect having a gradient from the cover heater to the floor heater.

- 33. A device in accord with Claim 32, wherein the furnace is cylindrical and further comprising a controller to control a temperature of the floor heater to be lower than a temperature of the cover heater.
- 34. A device in accord with Claim 32, wherein the insulating device has a tapered cone body with a coaxial cylindrical hollow space that is open at the top and bottom, the insulator device being positioned in the furnace so that the tapered end is towards the floor heater.
- 35. A device in accord with Claim 32, wherein the heaters comprise a heating surface having a ratio to a surface of a monocrystal to be produced to provide a temperature that is essentially homogeneous over a radial cross-section of the monocrystal and a temperature gradient between the floor heater and the cover heater that is essentially constant.
- 36. A device in accord with Claim 33, wherein the controller can lower the temperature of the floor heater continuously with reference to the cover heater.

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37. A device in accord with Claim 14, wherein said insulating device comprises graphite.

38. A method for producing a monocrystal of a III-V composite semiconductor material, said method comprising growing the monocrystal in a device according to any one of Claims 14 to 37.

39. A method for producing a monocrystal of gallium arsenide, said method comprising growing the monocrystal in a device according to any one of Claims 14 to 37.

## REMARKS

This amendment correct certain clerical type errors in the preliminary amendment filed previously. An early examination and notice of allowance are earnestly solicited.

Respectfully submitted,

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